

REMARKS

Claims 13-18 are all the claims pending in the application.

Claim 13 has been amended to specify that the carbon source is a resol xylene resin.

Support for this amendment can be found on page 11, lines 4-5, of the specification.

Claims 14-18 have also been amended to ensure that each of the recitations in the claims have proper antecedent basis.

At page 2 of the Office Action of October 5, 2004, Claims 13-17 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as allegedly obvious over JP 07-157307 ("JP '307").

JP '307 is relied upon as disclosing a process for producing a high purity β -type silicon carbide powder. JP '307 is further relied upon as teaching the use of a xylene resin for producing the silicon carbide powder.

Based on these reasons, the Examiner concludes that the product taught in JP '307 anticipates the presently claimed product.

Alternatively, the Examiner asserts that the presently claimed silicon powder is rendered obvious by JP '307. It is asserted that the process limitations in the Claim 13 does not differentiate the claimed invention from the product of JP '307.

Applicants respectfully submit that the presently claimed silicon carbide powder is neither taught, suggested nor rendered obvious by the teachings of JP '307.

The powder of JP '307 is obtained by hardening and drying a mixed solution of a liquid silicon compound, an organic compound and a catalyst. As the organic compound, JP '307 does not specify the use of a resol xylene resin.

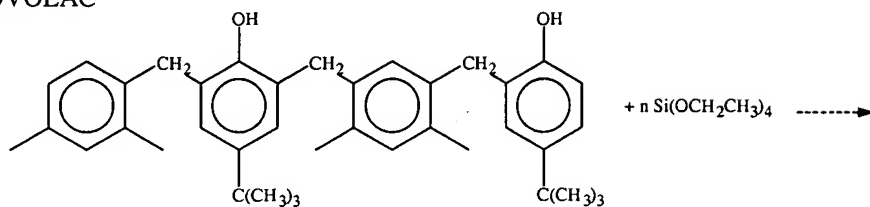
In the present invention, the silicon carbide powder is produced by sintering a mixture containing at least a silicon source and a resol xylene carbon source.

Since JP '307 does not use a resol xylene as a carbon source, Applicants assert that JP '307 does not teach the presently claimed invention "in as complete detail as is contained in the ... claim." *See Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Applicants further assert that a resol xylene resin could not be "at once envisaged" from the prior art. *See Ex parte A*, 17 USPQ2d 1716 (BPAI 1990).

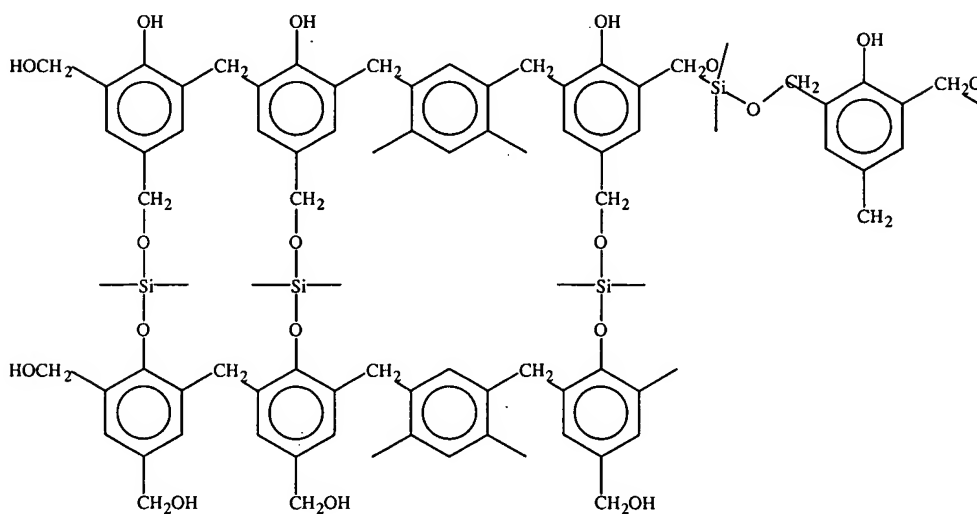
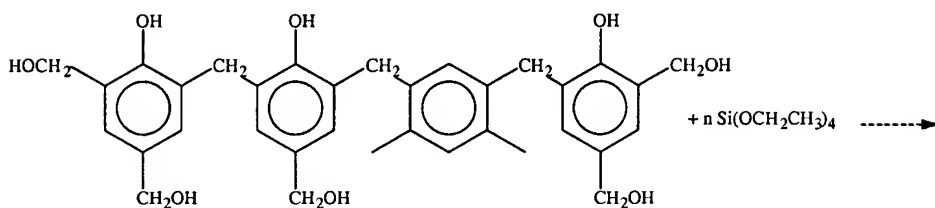
With respect to the product-by-process recitation of Claim 13, Applicants submit that presently claimed silicon carbide, as a product, is different and nonobvious from the product of JP '307. *See In re Thorpe*, 77 F.2d 695, 698, 227 USPQ 964,966 (Fed. Cir. 1985).

In contrast to the resol xylene resin of the present invention, novolac xylene resin has small amounts of reactive substituents. Resol xylene resin has greater amounts of reactive substituents, such as CH₂OH. In order to further explain this distinction, Applicants have provided the following comparative reaction schemes.

NOVOLAC



RESOL



When the xylene resin is a novolac xylene resin, the silicon source and the novolac xylene resin cannot be mixed uniformly. As a result, phase separation occurs. When resol xylene resin is employed, a 3d linkage polymer with tetraethoxysilane (TEOS) is produced

uniformly. This allows for the presently claimed silicon carbide powder has a high degree of purity after the uniform mixture is heated.

Applicants submit that in view of the differences between the claimed product and the prior art product, as well as the unexpected high purity of the claimed product, that the § 102/103 rejection should be reconsidered and withdrawn.

With respect to the § 103 rejection of Claim 18, Applicants submit that Claim 18 is not rendered obvious for the same reasons that Claims 13-17 are patentable over JP '307.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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